

ABSTRACT

Disclosed is a method of forming the floating gate in the flash memory device. After the first polysilicon film is deposited on the semiconductor substrate, the trench is formed on the first polysilicon film with the pad nitride film not deposited. The HDP oxide film is then deposited to bury the trench. Next, the HDP oxide film is etched to define a portion where the second polysilicon film will be deposited in advance. The second polysilicon film is then deposited on the entire top surface, thus forming the floating gate. Thus, it is possible to completely remove a moat and an affect on EFH (effective field oxide height), solve a wafer stress by simplified process and a nitride film, and effectively improve the coupling ratio of the flash memory device.